

Appendix A

Claim Amendments

1. (Currently amended) Process A process for preparing (S)-pantoprazole in enantiomerically pure or enantiomerically enriched form comprising oxidizing by oxidation of 5-difluoromethoxy-2-[(3,4-dimethoxy-2-pyridinyl)methylthio]-1H-benzimidazole, characterized in that wherein the oxidation is carried out in the presence of a chiral zirconium complex or a chiral hafnium complex.
2. (Currently amended) Process A process for preparing (S)-pantoprazole in enantiomerically pure or enantiomerically enriched form comprising oxidizing by oxidation of 5-difluoromethoxy-2-[(3,4-dimethoxy-2-pyridinyl)methylthio]-1H-benzimidazole, characterized in that wherein the oxidation is carried out in the presence of a chiral zirconium complex.
3. (Currently amended) Process A process according to Claim 1, characterized in that wherein (S)-pantoprazole is obtained in an optical purity of > 90%.

4. (Currently amended) ~~Process~~ A process according to Claim 1, ~~characterized in that~~ wherein the oxidation is carried out using cumene hydroperoxide.

5. (Currently amended) ~~Process~~ The process according to Claim 1, ~~characterized in that~~ wherein the chiral zirconium complex is selected from the group consisting of zirconium(IV) acetylacetone, zirconium(IV) butoxide, zirconium(IV) tert-butoxide, zirconium(IV) ethoxide, zirconium(IV) n-propoxide, zirconium(IV) isopropoxide [[or]] and zirconium(IV) isopropoxide/isopropanol, complex or and wherein the chiral hafnium complex is selected from the group consisting of hafnium(IV) acetylacetone, hafnium(IV) butoxide, hafnium(IV) tert-butoxide, hafnium(IV) ethoxide, hafnium(IV) n-propoxide, hafnium(IV) isopropoxide [[or]] and hafnium(IV) isopropoxide/isopropanol complex is used.

6. (Currently amended) ~~Process~~ The process according to Claim 2, ~~characterized in that~~ wherein the chiral zirconium complex is selected from the group consisting of zirconium(IV) acetylacetone, zirconium(IV) butoxide,

zirconium(IV) tert-butoxide, zirconium(IV) ethoxide,
zirconium(IV) n-propoxide, zirconium(IV) isopropoxide
[[or]] and zirconium(IV) isopropoxide/isopropanol ~~complex~~
~~is used.~~

7. - 9. (Cancelled)

10. (Currently amended) ~~Process~~ The process according to
Claim 1, ~~characterized in that~~ wherein the oxidation is
carried out in the presence of an organic base.

11. (Currently amended) ~~Process~~ The process according to
Claim 1, ~~characterized in that~~ wherein the oxidation is
carried out in the presence of a tertiary amine.

12. (Currently amended) ~~Process~~ The process according to
Claim 1, ~~characterized in that~~ wherein the oxidation is
carried out in an organic solvents solvent.

13. (Currently amended) ~~Process~~ The process according to
Claim 1, ~~characterized in that~~ wherein the oxidation is
carried out in an organic solvents solvent comprising 0 to
0.3% by volume of water.

14. (Currently amended) ~~Process~~ The process according to Claim 1, ~~characterized in that~~ wherein the oxidation is carried out in a solvents solvent of commercially available quality.

15. (Currently amended) ~~Process~~ The process according to Claim 1, ~~characterized in that~~ wherein the oxidation is carried out in an organic solvent which ~~essentially~~ comprises methyl isobutyl ketone.

16-19. (Canceled)

20. (Original) (S)-pantoprazole prepared by the process according to Claim 1.

21. (New) The process according to Claim 1, wherein the oxidation is carried out in the presence of a chiral auxiliary.

22. (New) The process according to Claim 21, wherein the chiral auxiliary is a (+)-L-tartaric acid derivative.

23. (New) The process according to Claim 21, wherein the chiral auxiliary is selected from the group consisting of (+)-L-tartaric acid bis-(N,N-diallyl amide), (+)-L-tartaric acid bis-(N,N-dibenzyl amide), (+)-L-tartaric acid bis-(N,N-diisopropyl amide), (+)-L-tartaric acid bis-(N,N-dimethyl amide), (+)-L-tartaric acid bis-(N-pyrrolidinamide), (+)-L-tartaric acid bis-(N-piperidinamide), (+)-L-tartaric acid bis-(N-morpholinamide), (+)-L-tartaric acid bis-(N-cycloheptyl amide), (+)-L-tartaric acid bis-(N-4-methyl-N-piperazinamide), dibutyl (+)-L-tartrate, di-tert-butyl (+)-L-tartrate, diisopropyl (+)-L-tartrate, dimethyl (+)-L-tartrate and diethyl (+)-L-tartrate.

24. (New) The process according to Claim 21, wherein the chiral auxiliary is selected from the group consisting of (+)-L-tartaric acid bis-(N,N-dimethyl amide), (+)-L-tartaric acid bis-(N-pyrrolidinamide) and (+)-L-tartaric acid bis-(N-morpholinamide).

25. (New) The process according to Claim 21, wherein the chiral zirconium complex is selected from the group consisting of zirconium(IV) acetylacetone, zirconium(IV) butoxide, zirconium(IV) tert-butoxide, zirconium(IV)

ethoxide, zirconium(IV) n-propoxide, zirconium(IV) isopropoxide, and zirconium(IV) isopropoxide/isopropanol, and

wherein the chiral auxiliary is selected from the group consisting of (+)-L-tartaric acid bis-(N,N-diallyl amide), (+)-L-tartaric acid bis-(N,N-dibenzyl amide), (+)-L-tartaric acid bis-(N,N-diisopropyl amide), (+)-L-tartaric acid bis-(N,N-dimethyl amide), (+)-L-tartaric acid bis-(N-pyrrolidinyl amide), (+)-L-tartaric acid bis-(N-piperidinyl amide), (+)-L-tartaric acid bis-(N-morpholinyl amide), (+)-L-tartaric acid bis-(N-cycloheptyl amide), (+)-L-tartaric acid bis-(N-4-methyl-N-piperazinyl amide), dibutyl (+)-L-tartrate, di-tert-butyl (+)-L-tartrate, diisopropyl (+)-L-tartrate, dimethyl (+)-L-tartrate and diethyl (+)-L-tartrate.

26. (Currently amended) The process according to Claim 21, wherein the chiral zirconium complex is selected from the group consisting of zirconium(IV) acetylacetone, zirconium(IV) butoxide, zirconium(IV) tert-butoxide, zirconium(IV) ethoxide, zirconium(IV) n-propoxide, zirconium(IV) isopropoxide, and zirconium(IV) isopropoxide/isopropanol, and

wherein the chiral auxiliary is selected from the group consisting of (+)-L-tartaric acid bis-(N,N-diallylamide), (+)-L-tartaric acid bis-(N,N-dibenzylamide), (+)-L-tartaric acid bis-(N,N-diisopropylamide), (+)-L-tartaric acid bis-(N,N-dimethylamide), (+)-L-tartaric acid bis-(N-pyrrolidinamide), (+)-L-tartaric acid bis-(N-piperidinamide), (+)-L-tartaric acid bis-(N-morpholinamide), (+)-L-tartaric acid bis-(N-cycloheptylamide), (+)-L-tartaric acid bis-(N-4-methyl-N-piperazinamide), dibutyl (+)-L-tartrate, di-tert-butyl (+)-L-tartrate, diisopropyl (+)-L-tartrate, dimethyl (+)-L-tartrate and diethyl (+)-L-tartrate, and wherein the oxidation is carried out in the presence of an organic base.

27. (Currently amended) The process according to Claim 21, wherein the chiral zirconium complex is selected from the group consisting of zirconium(IV) n-propoxide, zirconium(IV) isopropoxide and zirconium(IV) isopropoxide/isopropanol, and wherein the chiral auxiliary is selected from the group consisting of (+)-L-tartaric acid bis-(N,N-dimethylamide), (+)-L-tartaric acid bis-(N-pyrrolidinamide) and (+)-L-

tartaric acid bis-(N-morpholinamide) and wherein the oxidation is carried out using cumene hydroperoxide.

28. (New) The process according to Claim 21, wherein the chiral zirconium complex is selected from the group consisting of used is zirconium(IV) n-propoxide, zirconium(IV) isopropoxide and zirconium(IV) isopropoxide/isopropanol, and wherein the chiral auxiliary is selected from the group consisting of (+)-L-tartaric acid bis-(N,N-dimethylamide), (+)-L-tartaric acid bis-(N-pyrrolidinamide) and (+)-L-tartaric acid bis-(N-morpholinamide) and wherein the oxidation is carried out using cumene hydroperoxide in the presence of a tertiary amine.